Therapy’s Role in Para Adapted Sports

Jane Case-Smith School-Based Symposium

July 23rd 2018

Alicia Almond PT, DPT, NCS and Kevin Stahr OTR/L, AT
Objectives

1. Participants will be educated on the potential benefits of regular participation in adapted sports and recreation
2. Participants will be educated on Greater Columbus resources and programmers
3. Participants will be educated on therapy’s role in promoting recreation, leisure, and sport
4. Participants will be educated on OSU initiatives for promoting adapted sports
Six groups in the Paralympic movement

- Amputee, limb loss
- Cerebral palsy
- Visual impairment
- Spinal cord injuries
- Intellectual disabilities
- Les Autres “the others”
Recreation and Sport Can Span the Scope of Practice

- Acute care
- Inpatient
- Outpatient
- Schools
- Orthopedics
- Sports medicine
- Home health
- Specialty clinics
- Research
Benefits of Sports and Rec Involvement

- Improved functional status
- Improved QOL
- Improved socialization
- Enhanced perception of physical & social self-worth
- Disease prevention
- Health promotion
- Maintenance of functional independence

- Greater sense of control over situation
- Work & school performance
- Promoting relationships with loved ones
- Cost to insurance
- Opportunities for travel
- Healthy living

Hanson 2001 and Stephens et al 2012
Benefit of Sport Reported by Athletes

1. **Socialization** (incidental learning from others, social support, like-minded disabled individuals)

2. **Self-worth** (new lifestyle, purpose, reaffirming abilities, building confidence)

3. **Physical challenge** (maintenance of body weight, functional capacity, pain relief, reducing incidence of pressure sores)

4. **Emotional benefits** (emotional outlet, distraction of the day-to-day problems, focus for energy)

Stephens et al 2012
Benefits: Work and school

- Survey of 48 individuals with SCI
  - **Athlete group**, 76% employed or enrolled in an educational program
  - Non-athlete group, 28% employed or enrolled in an educational program

Hanson 2001
Benefits: Is it worth it?

C5 AIS D tetraplegia
- Chronic pain
  - Conservative mgmt in outpatient therapies and medications at an estimated cost over 5 years of $112,000
- The individual was introduced to adaptive sports
  - Within 3 years...
    - Decreased % pain
    - Completed return to driving program
    - Now participates in multiple sports
  - Total estimated cost over 3 years $3,800

Lee 2016
Benefits of Sport and Rec Involvement

Team Force Quad Rugby pulls the best athletes from wheelchair rugby teams around the country for a chance to test their skills against the highest level of competition.

https://www.facebook.com/spinalcordinjury.co.uk/videos/1329936167032181/
Amps4Ohio

Juanita Mengel, Founder / President
740-777-8180
amps4ohio@gmail.com
http://www.amps4ohio.com/

MONTHLY MEETINGS
2nd Wednesday of every month
(In the American Orthopedics Building)
1151 W. 5th Ave
Columbus, Ohio 43212
NEXT MEETING:
November 8, 2017  6-8pm
Amputee Recreation Support Group of Central Ohio

Bob Haas, Founder
614-288-5105
http://www.arsgcoh.org

ARSGOCO
Adaptive Sports Connection

Madison Mattey, Program Coordinator

6000 Harriott Rd
Powell, Ohio 43065
614-389-3921
http://www.taasc.org/

Cycling, Kayaking/
Paddling, Sailing,
Water Skiing,
Alpine Skiing, Archery
Go Baby Go, Rock Climbing
Adaptive Sports Program of Ohio

Lisa Followay, Director
2829 Cleveland Road, Suite B
Wooster, Ohio 44691
330-262-1200
http://adaptivesportsohio.org/

Archery, Power Soccer, Wheelchair Rugby, Sailing, Sled Hockey, Softball, Swimming, Track, Wheelchair Basketball
Discovery Riders Inc.

Adam Judd
Zanesfield, OH
Phone: (937) 935-6545
adam.judd1984@gmail.com
driders@bright.net
Franklin Park Indoor Adventure Center

Mary Beth Moore, CTRS
Luke Edelbrock
Rae Nutter
Columbus Recreation and Parks
1111 E. Broad St
Columbus, Ohio 43205
(614) 645-5648

http://columbus.gov/recreationandparks/programs/Therapeutic-Recreation/

Fitness Center, Wheelchair Rugby, Power Soccer, Track & Field, Wheelchair Basketball, Boccia, Mixed Football, Goal Ball, Adaptive Swim Team
Therapeutic Recreation Activities

**Power Soccer**
Join us for this exciting and interactive sport! Power Soccer is a wheelchair-based sport that uses similar rules to soccer.
Contact Luke Edelbrock at (614) 645-0257 for additional information.

**Adaptive Swim**
Swimmers must be able to swim one length of the pool (25m) before the start of swim team. All four competitive strokes will be covered. Competition is optional.
Contact Rae Nutter at (614) 654-5225 for additional information.

**Boccia**
Boccia is a game that can be enjoyed by persons of all ages and abilities. Come and join our Boccia Team and our quest to be the best!
Contact Luke Edelbrock at (614) 645-0257 for additional information.

**Wheelchair Basketball**
Wheelchair basketball is basketball played by people in wheelchairs and is considered one of the major disabled sports practiced.
Email Dick Swauger at dsauger@ee.net for additional information.

**Wheelchair Football**
Stretching, Techniques, Skills, and Drills will be taught by instructor Luke Edelbrock and former Ohio State Buckeyes & NFL star Roger Harper.
Contact Luke Edelbrock at (614) 645-0257 for additional information.

**Quad Rugby**
Wheelchair rugby is a team sport for athletes with a disability. It is practiced in over twenty-five countries around the world and is a summer Paralympic sport.
Email ASPR info@adaptivesportsohio.org for additional information.

**Goalball**
This 1 on 1 team sport was designed primarily for the blind and visually impaired but is welcome to all participants with or without disabilities.
Contact Jim Debus at jmdebus@columbus.rr.com for additional information.

**Get Fit - Get Healthy**
A family fitness, recreation, and educational program to promote healthy lifestyles for youth age 12-18 with disabilities. *Grant funded by the Cardinal Health Foundation and essential to Wellness Program.*

- [https://www.youtube.com/v/yS3Q_2v91r8](https://www.youtube.com/v/yS3Q_2v91r8)
- [https://www.youtube.com/v/Ws50T3WdonE](https://www.youtube.com/v/Ws50T3WdonE)
- [https://www.facebook.com/spinalcordinjury.co.uk/videos/1329936167032181/](https://www.facebook.com/spinalcordinjury.co.uk/videos/1329936167032181/)

Franklin Park
Greater Columbus Adapted Rowing Association

Helmut Berthold, Coach
Jody Stahr, Physical Therapist
614-946-3564
3033 Fishinger Road
Hilliard, Ohio 43026
http://www.columbusrowing.org/
Nationwide Children’s

CLOSE TO HOME Yoga Groups

- Westerville CTH & Lewis Center CTH
Ohio Sled Hockey

Angie Roush, General Manager
419-566-9247
http://pointstreaksites.com/view/ohiosledhockey

Kelly Fenster
kfenster45@gmail.com

https://www.youtube.com/watch?v=udPWYVtjhPo&sns=fb
Royal Arts

Royal Arts Fencing Academy
5770 Westbourne Ave
Columbus, OH 43213
info@royalarts.org
Adaptive Ascents Clinics are designed to offer adaptive climbing opportunities to any individual with a disability or exceptionality. Whether you’ve climbed before or if you are new to climbing, this event is for you! Come experience the joys, benefits, and challenges of rock climbing with our amazing staff and volunteers.

Vertical Adventures
6513 Kingsmill Court
Columbus, OH 43229
614-888-8393

https://verticaladventuresohio.com/va/adaptivedisabilities/
Community Calendar

http://go.osu.edu/adaptedcommunityevents

Adaptive Sports Institute Community Activities (all dates and times subject to change)

[Calendar page showing events and activities]
Barriers to Transitioning into Adapted Sports and Recreation
Barriers to participation in recreation

3 themes indicate barriers to social and community participation

1. Resources and environmental accessibility
2. Other people influence community engagement
3. Health issues affect social participation
Barriers for Patients and Families

- Organizational barriers
  - Logistics of traveling, time & financial constraints, geographical issues

- Medical Barriers
  - Secondary complications: UTI, fatigue, difficulty resting

- Emotional Barriers
  - Introduced early in rehab and were under too much emotional pressure
  - Reduction in confidence after injury

- Lack of information
  - Limited information about sports in diagnostic specific units
  - Insufficient information in acute phase post-injury
  - Little focus on sport in rehabilitation

- Views held by others
  - Felt patronized
  - Lack of public awareness of availability

Stephens 2012
Barriers for Patients and Families

“Although wheelchair sport is an option for many persons with physical disabilities, those with highest levels of functional impairment have fewer disability sport options and therefore are at a greater risk for reduced exercise and associated secondary conditions”

Barfield & Malone 2013
Current Challenges According to Programmers

1. Transportation
2. Difficulty **advertising** program to potential athletes
3. **Finding/ recruiting** participants for competitive teams
4. Continuity of information from rehabilitation team to patients about access & available options
5. **Funding** (cost of running a program, cost of equipment for participants) Ex: cost of starting a program ~$30,000
6. Lack of **local competition**, requires participants to **travel**
History...for therapists

Paralympics
- Began in 1960
- 2018 Winter Olympics
  - 42 Nations
  - 500+ Athletes
  - ~80 events

Sports: Auburn, Arizona, Edinboro, Illinois, Texas

Programs: Wright State, Florida, OSU

College
- Look closely?

High school
- Up & coming
- General consensus:
  - “we can do better”

Ohio
- Paralympians
- College
- High school
- Programs
What Does This Mean for Us?
Therapists’ Role

- Therapists are in an excellent position to promote sports in rehabilitation because of their knowledge & skills in activity analysis, equipment adaptation, & psychosocial issues
- However, only 16% of athletes credited their therapist(s) for exposure to sports

Hanson 2001
Adapted Sports Institute
Our vision is to be the preeminent, interdisciplinary resource in creating, developing and maintaining a culture that supports athletic performance and recreational activity to promote health and wellness for all individuals.

Our Mission
- **Support** individuals with disabilities in developing and maintaining a healthy lifestyle
- Strive to **unite** and support organizations that provide opportunities for individuals to develop independence, confidence and fitness
- **Integrate** evidence-based and innovative treatment strategies for injury prevention and performance in adapted sports

Our Adapted Sports Institute Team
- Specialty certificated as assistive technology professionals and seating and mobility specialists
- Board certified physical therapists in neurologic and orthopedic clinical specialties
- Physical therapists, occupational therapists and rehabilitation engineers
- Athletic trainers
OSU Programing

- Therapy outings
- Injury prevention
- Self-care and community readiness
- Equipment recommendations

- Calendar / APP
- Events (Rowing / Rugby / NRN)
- Symposium
- IRB’s
- Collaboration with NCH

6TH ANNUAL PAY-TO-PLAY WHEELCHAIR RUGBY

What: You are invited to make a team of 4-6 players that will take on the Columbus Buckeye Biltte wheelchair rugby team in a 30 minute match! No experience is necessary and all ages are welcome to play! Registration is $150 per team, sign up early to guarantee slots!

Why: Proceeds benefit the Buckeye Biltte team and the OSU Student Occupational Therapy Association. Learn more about adaptive sports and get a great upper body workout!

Sign up here: https://accrugby.eventbrite.com
Questions: osuotavolunteer@gmail.com

Saturday March 24, 2018
Franklin Park Adventure Center
1735 E. Broad St. 9am-6pm

“Rowed” to Recovery

A fundraiser benefiting the NRN of The Ohio State University Wexner Medical Center and the Christopher and Dana Reeve Foundation

On December 9th, OSU’s Wexner site in collaboration with Columbus Parks and Rec will be hosting a Row-A-Thon event at Franklin Park Adventure Center. Teams of four will race for a 150 meter distance in 30 minutes. Teams will be divided into: Able-bodied, Adaptive, and Mixed. Top teams in each division will receive medals and prizes. Registration is $150.00 per team, with all proceeds going to the Christopher and Dana Reeve Foundation. We will also be accepting other donations for the fundraiser.

Saturday
DEC 9th
8AM-2PM
Franklin Park Adventure Center
1735 E Broad St
Columbus, OH 43205

The rehabilitation Network of OSU Presents

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Building Relationships: Therapy Outings
Goal Setting: CARF

1. Healthy living
2. Peer support
3. Independent living
4. Community reentry
5. Leisure & recreation
6. Life planning
7. Adaptive Sports

Commission on Accreditation of Rehabilitation Facilities
Goal Setting: Individualized Education Plan

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<th>POSTSECONDARY TRANSITION SERVICES</th>
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<td>MEASURABLE POSTSECONDARY GOAL:</td>
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<td>COURSES OF STUDY:</td>
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<td>NUMBERS OF ANNUAL GOAL(S):</td>
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<th>EMPLOYMENT (optional for 15 and younger)</th>
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| INDEPENDENT LIVING (As appropriate)     |
| MEASURABLE POSTSECONDARY GOAL:          |
| COURSES OF STUDY:                       |
| NUMBERS OF ANNUAL GOAL(S):              |
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<td>In what ways will the child have the opportunity to participate in nonacademic/extracurricular activities with his/her non-disabled peers? Describe</td>
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<td>If the child will not participate in non-academic/extracurricular activities, explain</td>
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- Attend adapted sports / rec event
- Identify a peer mentor who participates in sports / rec
- Identify volunteer opportunity with community programmer
- Collaborating with therapists through the continuum
Injury: Are Adapted Athletes at Higher Risk?

The majority of medical conditions encountered with adapted athletes are the same as able bodied athletes.

De Luigi et al 2011
Injury: Impact

- Consequences of injuries may be greater for adapted athletes
  - Additional loss in function
  - Increased caregiver assistance
  - Decreased community mobility
  - Disuse and increased risk of cardiovascular disease
  - Increased cost in medical management
  - Lower quality of life scores on outcome measures
Injury: Prevention

- Transfer technique
- Propulsion technique
- Lifestyle Considerations
  - Home
  - Work
  - Driving
  - Community activity
- Pressure relief strategy
- Home program for strength and flexibility
Community Preparedness

‘Go Bag’
- Consists of all of your **self-care & safety** items that you may need in the community
  - Personalize your bag
  - Consider travel
  - Brainstorm with medical team
  - Share ideas with peers
## Community Preparedness: Go Bag

- Catheter supplies
- Extra leg bag & supplies
- Small bungee cord
- Hand wipes / sanitizer
- Water bottle
- Garbage bag
- Change of clothes
- Extra underwear
- 4 pairs of medical gloves
- Lubricant/suppository
- MWC gloves
- Medical Hx list
- AD wallet card
- Business cards
- Physicians, therapists, vendors, supply companies
- Spare tube
- Small tool kit
- Spare cushion cover
- Ted hose
- AE for meals
- Sunglasses
“Basic principles of sports wheelchair design are universal across sports and include fit; minimizing weight while maintaining high stiffness; minimizing rolling resistance; and optimizing the sports-specific design of the chair. However, a well designed and fitted wheelchair is not sufficient for optimal sports performance; the athlete must be well trained, skilled and use effective biomechanics.”

Cooper and De Luigi, 2014

Role of specialists at OSUWMC:
1. Optimize biomechanics, strength and flexibility
2. Equipment fitting and skill of use
3. Injury intervention and prevention
Rowed to Recovery 2017
Adapted Sports Symposium

November 16, 2018

Adapted Sports Symposium

“The pain is in the comparison” - Blake Haxton

“You do not have a soul. You are a soul. You have a body” - C.S. Lewis

https://www.youtube.com/watch?v=kSI8oWz9pZc
How can I get involved?

Coach
Support staff
Equipment specialist
Referee
Classifier
Fundraisers
Volunteer at local tournaments
Contact Information

Alicia Almond PT, DPT, NCS
Alicia.almond@osumc.edu

Kevin Stahr OTR/L, AT
Kevin.stahr@osumc.edu
References

Antcliff, P; Turner, S. Minimizing secondary complications for clients with SCI: a guide for general occupational therapy practitioners. 2914


Ljunberg, I; Kroll, T; Libin, A; Gordon S. Using peer mentoring for people with spinal cord injury to enhance self-efficacy beliefs and prevent medical complications. Journal of Clinical Nursing. 2011; 20, 351-358

Simpson, L; Erg, J; Hsieh, J; Wolfe, D. The health and life priorities of individuals with spinal cord injury: a systematic review. Journal of Neurotrauma. 201229, 1548-1555


Welitzzener, E; Surca, S; Wiese, S; Dion, A; Roussos, Z; Renwick, R; Yoshida. Getting on with life: positive experiences of living with a spinal cord injury. Qualitative Health Research 2011, 21, 1455-1466